



Exemplum. Ad demonstrationem Solutionis nostræ suffecerit exemplum simplicissimum. Sit itaque $n=1$; quo in Casu est ABD semicirculus diametro AG descriptus, atque est EBF item semicirculus descriptus diametro AE . Est autem in hoc Casu $\frac{x x^n}{\sqrt{a^{2n}-x^{2n}}} = \frac{x x}{\sqrt{a^2-x^2}}$. Unde

in § 3. fit $\dot{z} = \frac{x x}{\sqrt{a^2-x^2}}$; adeoque $z = a - \sqrt{a^2-x^2}$, quæ æquatio est ad Circulum diametro $AG=a$ descriptum, ut fieri debuit. Item pro n scripto 1, æquatio $z x - z x \times a^{n-1} = \dot{r} x^n$ (§ 12.) migrat in hanc $\dot{z} x - z \dot{x} = \dot{r} x$. Unde exterminando r ope æquationis $\dot{r} r = \dot{x} x - \dot{z} z$, fit $\frac{2 \dot{z} z x - x \dot{z}^2}{x^2} = -\dot{x}$; adeoque regrediendo ad Fluentes $\frac{\dot{z} z}{x} = -x + a$, quæ æquatio est ad Circulum diametro $AE=a$ descriptum, ut etiam fieri debuit.

III. *Extract of a Letter of Dr. Chr. Hunter, M.D. to Dr. J. Woodward, R. S. S. from Durham, giving an Account of a Roman Inscription, lately dug up in the North of England; with some Historical and Chronological Remarks thereon.*

THE Inscription which comes herewith, (*Fig. II.*) was dug up, two Years ago, in the *Roman CASTRUM*, near *Lanchester*: The Inscription is very legible, and gives me reason to hope, a Search after the first Fortifying this Place will not be unnecessary; especially, being able to fix the Time of Gordian's Repair-

Repairing this Fortrefs, to the 243d Year of Christ. We may reasonably ascribe the Foundation to the prudent Administration of *Julius Agricola*, in the Reign of *Fl. Vespasian*, about 169 Years before. In Confirmation of this, I find the following Particulars very material, and think it not unbecoming to begin my Enquiry with *Vespasian's* first Appearance upon the Theatre of Fame in *Britain*.

In the Second Year of the Emperor *CLAUDIUS*, *Ann. Dom.* 44. the *Romans* invaded *Britain*, under the Command of *Aulus Plautius*, in which Expedition *Vespasian* *, then Legate of the Second Legion, made a glorious Figure; having been engaged in no less than thirty Battels, and reduced two powerful Provinces, above twenty Towns, and the Isle of *Wight*. All these Successes, tho' continued with good Improvements in some of the following Years and Governments, could not frighten the Natives into an entire Submission; especially, no Advance being made into the Country of the *Brigantes*, till the Advancement of *Vespasian* to the Imperial Throne, about 26 Years after, *Ann. Dom.* 70. Then the whole Empire was deliver'd from the Miseries of *Nero's*, and the short but lamentable Devastations of the three succeeding Reigns: *Vespasian* then resolv'd to push on his begun Conquests in *Britain*; choice Armies, commanded by experienced Generals, are sent over; and the XXth Legion, having in the preceding Troubles acted seditiously, (not without Difficulty) was reduced to submit to *Vespasian* (most of the Officers as well as Soldiers having been advanced by *Vitellius*). *Julius Agricola* is constituted Legate, who, under the Governour *Petilius Cerealis*, bore a considerable Share

* *Suetonius*, *Vespasian*, Cap. 4.

in the Successes against the *Brigantes*; * “ Sed primò
 “ *Cerealis* modò labores & discrimina, mox & gloriam
 “ communicabat: Sæpe parti Exercitus in experimen-
 “ tum, aliquando majoribus copiis ex eventu præfecit.
Tacitus afterwards in a few Words sums up the Whole
 of *Cerealis* his Acquisitions, † “ Terrorem statim intu-
 “ lit *Petilius Cerealis*, *Brigantum* Civitatem, quæ nu-
 “ merosissima Provinciæ totius perhibetur, aggressus;
 “ multa prælia, & aliquando non incruenta; magnam-
 “ que *Brigantum* partem aut victoria amplexus, aut
 “ bello. . . . Notwithstanding these Advantages, I dare not
 suppose the *Romans* to have then penetrated so far into
 this Province as our *Longovicum*, which is situate so
 near the Northern Bounds of the *Brigantes*, that at pre-
 sent it's not distant above twelve Miles from *Corbridge*,
 the Roman *Curia*, the chief Town of the adjoining Peo-
 ple the *Otadini*. I now advance to my principal Mo-
 tive, (I hope its Length may deserve Pardon, being un-
 der no Obligation to account for the Government of
Jul. Frontinus Successor to *Cerealis*) to fix upon the se-
 cond Year of *Julius Agricola*'s Government for this Work,
 which *Tacitus* thus describes, ‡ “ Sed ubi *Ællas* adve-
 “ nit contracto Exercitu— loca Castris ipse capere,
 “ æstuaria ac sylvas ipse prætentare: & nihil interim
 “ apud Hostes quietum pati, quo minus subitis Excur-
 “ sibus popularetur; atque ubi satis terruerat, parcen-
 “ do rursus irritamenta Pacis ostentare. Quibus rebus
 “ multæ Civitates quæ in illum diem ex æquo egerant,
 “ datis Obsidibus iram posuere, & Præfidiis Castris-
 “ que circumdatæ, tantâ ratione curæque, ut nulla an-
 “ tè *Britanniæ* nova pars illacessita transierit. This ex-
 cellent Conduct *Tacitus* further confirms from the Ob-

* *Tacit. Vit. Agric. 8.*

† Cap. 17.

‡ Cap. 20.

servation of Others. “ Adnotabant periti, non alium
 “ Ducem Opportunitates locorum sapientius legisse,
 “ nullum ab *Agricola* positum Castellum aut vi Ho-
 “ stium expugnatum, aut pactione aut fugâ delertum.

Agricola, this Summer, having quieted so large a
 Tract, and finished so many Fortresses, it cannot be ex-
 pected all should be built with the most exquisite Art,
 sufficient to perpetuate them. I proceed to *Gordian's*
 Repairs ; whose Historian *Julius Capitolinus* having ne-
 ver once named *Britain*, yet giving so many Hints of
 the excellent Oeconomy of his Government, under the
 prudent Administration of his Father-in-Law *Misitheus*,
 I dare not fix this Work till the Third Year of his Reign,
 He having before been under the Direction of the Eu-
 nuchs and Officers of the Court, whom *Capitolinus*
 represents, in *Misitheus* his Letter to *Gordian*, to have
 prostituted all Employments to their own Covertness
 and mercenary Creatures.

Durham, July 5.

1717.